

**REGULATORY FRAMEWORK FOR THE BDCP EFFECTS  
ANALYSIS RELATING TO SPECIES AND HABITAT COVERED  
BY THE PLAN AND INCIDENTAL TAKE PERMITS**

The Effects Analysis (EA) for the Bay Delta Conservation Plan (BDCP) is intended to serve the needs of the several regulatory processes that are integral to compliance with all applicable State and federal endangered species protection laws. Such compliance will be necessary for the BDCP applicants to receive incidental take authorization for continued operations of the Central Valley Project (CVP) and the State Water Project (SWP) (i.e., through issuance of a Habitat Conservation Plan [HCP] and completion of a “Section 7 consultation” by the United States Fish and Wildlife Service [USFWS] and the National Marine Fisheries Service [NMFS] and approval by the Department of Fish and Game of a Natural Community Conservation Plan [NCCP]).

It is expected that the EA will include an analysis and description of the likely impacts, both adverse and beneficial, of the proposed incidental take permits and proposed BDCP actions on biological resources that can be incorporated into the various State and federal regulatory documents required of this conservation planning effort. Consequently, the EA will need to anticipate the various regulatory approaches, standards, and criteria reflected in the ESA, NCCPA, NEPA, CEQA and the Delta Reform Act. Such a “global” analysis will ensure continuity and consistency between the various documents that provide the basis for the issuance of regulatory authorizations.

The following outline identifies specific approaches to the analysis of effects required by each of the regulatory processes that must be satisfied before take authorizations may be issued pursuant to the incidental take permits, the BDCP, and its companion biological assessment. The outline, however, takes into consideration only the analysis of the effect of the proposed action on biological resources; it does not incorporate approaches to the evaluation of effects unrelated to those resources. The purpose of this outline is to help guide and shape the EA process to ensure that the resulting analyses conform to the required regulatory frameworks and adhere to the standards reflected in each.

The Endangered Species Act – Section 10 and Habitat Conservation Plans

*Purpose of the Effects Analysis*

- ESA section 10 requires that HCPs, as mechanisms for authorizing incidental take, identify the impacts likely to result from the proposed taking of the species covered by the plan.
- The focus of this impact analysis is on the anticipated level of take likely to occur as a result of the activities covered by the plan. Typically, the impact analysis in an HCP also describes the expected beneficial outcomes that the plan’s conservation measures are expected to achieve.

- The effects analysis in the HCP is used by fish and wildlife agencies to help determine whether the issuance of a section 10 permit is likely to appreciably reduce the survival and recovery of the species in the wild (*i.e.*, jeopardy standard).

#### *Description of Baseline Conditions*

- “Baseline” conditions reflect the number and distribution of species and/or the extent of habitat in the plan area, based on the best available science, at the time the plan is being prepared.
- As such, the HCP baseline conditions represent a snapshot in time that aids in the determination of the number of individuals to be taken or the amount of habitat that will be affected as a result of the activities to be carried out.

#### *Standards and Criteria by which Impacts are Assessed*

- Applicant must determine the expected level of impact from take of covered species that will likely occur as a result of the proposed actions.
- The agencies use this information to determine whether the anticipated take levels and related impacts appreciably reduce the likelihood of survival and recovery of the species.
- The agencies also use this information to quantify the amount of take to be authorized under the section 10 incidental take permit and to gauge whether the conservation strategy is minimizing and mitigating the taking to the maximum extent practicable.

#### *Methods and Approaches to the Analysis*

- Approach to the calculation of take depends on the ability of HCP participants to determine, to the extent possible, the number of individual animals of a covered species that are likely to be taken or the amount of habitat to be affected.
- Depending on the available information, proposed incidental take levels can be expressed in the HCP either: (1) in terms of the number of animals to be “killed, harmed, or harassed” if those numbers are known or can be determined; or (2) in terms of the amount of habitat or other appropriate habitat units (*e.g.*, acres of land or acre-feet of water) to be affected generally or because of a specified activity, in cases where the specific number of individuals is unknown or indeterminable.
- Quantification of take is preferred, but using a habitat surrogate is an acceptable substitute when quantification is not possible.

### *Scope of the Analysis*

- The scope of the HCP analysis of expected take is limited to the project or plan area.

### *Role of Alternatives*

- Applicants must specify in habitat conservation plans what alternative actions to the taking of federally listed threatened and endangered fish and wildlife species were considered and the reasons why those alternatives are not proposed to be used. Plants do not need to be included in an alternatives analysis because their taking is not prohibited.
- Two types of alternatives are typically considered in HCPs: 1) an alternative that would result in take levels below those anticipated for the proposed project, and 2) a “no-action” alternative (no permit is issued, and take would be avoided). In the context of large-scale conservation plans with multiple components, such as the BDCP, the analysis of alternatives should focus primarily on the expected consequences to covered fish and wildlife species that would result if other approaches to the proposed project were adopted.
- The alternatives analysis should discuss each alternative in light of its practicability, taking into account such factors as cost, logistics, and technology in the context of project purpose.
- The discussion of alternatives to take does not require the same level of analysis as the take assessment for the proposed actions. However, the analysis of these alternatives should be sufficiently detailed to convey the magnitude of the reduction in take.
- Because of the different purpose, the alternatives to take evaluated in the HCP may be different from the alternatives evaluated in the NEPA document.

### *Relationship to Section 7 Intra-Agency Consultation Process*

- Although consultation under section 7 is the responsibility of federal agencies, permit applicants under section 10 may, in the HCP, address the requirements of section 7, including the analysis of direct, indirect, and cumulative effects.

## The ESA – Section 7 Biological Assessment and Biological Opinion

Section 7 of the ESA requires that all federal agencies, in consultation with the Services (Fish and Wildlife Service or National Marine Fisheries Service, the “Services”), ensure that “any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence” of any listed species or result in the destruction or adverse modification of designated critical habitat.

Under the section 7 formal consultation process, the federal action agency prepares a biological assessment that includes an evaluation of the potential effects of the proposed federal action on listed and proposed species and designated and proposed critical habitat. On the basis of the biological assessment and on the best scientific and commercial data available, the Services prepare biological opinions to determine whether the proposed federal action is likely to jeopardize listed species or result in the adverse modification or destruction of critical habitat.

In the context of the BDCP, the Services are planning to prepare a single biological opinion that covers both the Services’ actions related to the issuance of section 10 permits (intra-agency consultation) and Reclamation’s actions related to the operation of the CVP, including those actions addressed in the BDCP and potentially actions that are outside the scope of the BDCP.

### *Purpose of the Effects Analysis*

- The purpose of the effects analysis under section 7 is to enable the Services to determine whether the effects of a proposed federal action, along with the cumulative effects, are likely to result in jeopardy to a listed species or cause adverse modification or destruction of critical habitat.
- The ESA regulations define “jeopardize the continued existence of” as “to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.”

### *Description of Baseline Conditions*

- The environmental baseline enables federal agencies to understand existing conditions before they consider the effects of a proposed action and cumulative effects on those conditions.
- Under section 7, the scope of the environmental baseline may extend beyond a “snapshot in time” and reflect the effects of past and present actions that may be latent and likely to manifest themselves in the future.

- The section 7 regulations provide:

[t]he environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process.<sup>1</sup>

#### *Standards and Criteria by which Effects are Measured*

- The analysis of the effects of the proposed action take into account all direct and indirect effects, including the effects of interrelated and interdependent actions, and the cumulative effects of other activities on federal threatened and endangered species and designated critical habitat.
- To determine whether an action is likely to cause jeopardy, the Services must examine the species' current status and the effects of the proposed action and cumulative effects, added to the environmental baseline.
- The Services generally analyze the proposed action against "the aggregate effects of everything that has led to the species current status, and, for non-federal activities, those things likely to affect the species in the future." The Services formulate their biological opinions as to whether the the action, taken together with cumulative effects, is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.

#### *Scope of the Analysis*

- The scope of analysis is defined by the "action area," which are the areas that would be affected directly or indirectly by the federal action. The action area generally extends beyond the project or planning area.

#### *Role of Alternatives*

- The biological assessment may include alternative actions that were considered by the federal agency to the proposed action. The alternatives to take described in the BDCP will likely suffice for that purpose.

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<sup>1</sup> 50 C.F.R. § 402.02.

## Natural Community Conservation Planning Act

The NCCPA provides little guidance regarding the specific approaches to the analysis of effects to covered species and their habitats required of the conservation plan. Typically, an effects analysis in an HCP/NCCP includes both an assessment of take likely to result from covered activities, as well as an evaluation of the expected biological outcomes of the plan. Together, these analyses are used by DFG to support findings that the permit issuance criteria under the NCCPA have been met.

### *Purpose of the Effects Analysis*

- The NCCPA generally requires that a plan provide for the conservation and management of covered species and their habitats. The effects analysis should provide sufficient information and analysis to support a finding by DFG that the plan will likely achieve these outcomes.
- Specifically, the analysis should address each of the biological criteria that must be met to support necessary findings for plan approval, as set out in section 2820 of the NCCPA.

### *Description of Baseline Conditions*

- The NCCPA is silent regarding the appropriate approach to describing baseline conditions. However, the NCCPA recognizes the interrelationship of CEQA and the act. As such, to ensure consistency between the analyses within the NCCP and its related CEQA document, it would be expected that a CEQA-type baseline would suffice for the effects analysis within the conservation plan.

### *Standards and Criteria by which Effects are Measured*

- The effects analysis in an NCCP should be sufficient to support several findings that will be made by DFG and the lead CEQA agency.
- The analysis should support a finding that the plan provides for the conservation and management of covered species and their habitats, as set out in section 2820. Specifically, the analysis should address the sufficiency of the measures to maintain ecological integrity of habitat, ecosystem functions, and biological diversity; establish linkages to habitat areas outside the plan area; protect and maintain habitat areas of sufficient size to support sustainable populations of covered species; incorporate a range of environmental gradients and habitat diversity; and sustain movement and interchange of organisms to maintain the integrity of habitat areas within the plan area.
- The analysis also should demonstrate that the implementation of covered activities will not jeopardize the continued existence of species covered by the plan.

- The analysis should be sufficient to support CEQA-related analysis of the sufficiency of mitigation for future projects that rely on the EIR prepared for the NCCP to address their project impacts to covered species and natural communities.

#### *Scope of the Analysis*

- For the purpose of the NCCPA, the effects analysis should be focused primarily on the plan area.
- Consideration should be given to areas adjacent to the plan area in order to provide an assessment of connectivity and species movement outside of the plan area.

#### *Role of Alternatives*

- The analysis of alternatives occurs in the context of the EIR prepared for the NCCP.

### National Environmental Policy Act

#### *Purpose of the Effects Analysis*

- The purpose of the effects analysis under NEPA is to determine impact of the proposed action on the “human environment,” which includes both the natural and physical environment and the relationship of people to that environment.

#### *Description of Baseline Conditions*

- Under NEPA, the affected environment represents the baseline conditions against which the effects of the proposed action are analyzed.
- The NEPA “baseline” reflects existing environmental conditions, including the effects of past and present ongoing actions. The description of baseline conditions should capture the dynamic nature of past and present actions. As noted, for instance, in guidance from the Council on Environmental Quality (CEQ), “[t]he baseline condition should include a description of how conditions have changed over time and how they are likely to change over time in the future without the proposed action.”
- Typically, the NEPA “no action” alternative may serve as the “baseline” condition against which to measure the effects of the action.

### *Standards and Criteria by which Effects are Measured*

- NEPA does not require that an EIS specify the level of significance of each impact. Rather, it focuses on the context and intensity of the effects.
- The effects analysis must cover direct, indirect, temporary, permanent, and cumulative impacts

### *Scope of the Analysis*

- The EIS must analyze all direct and reasonably foreseeable indirect impacts of the proposed project. As such, the areas considered in the effects analysis may extend beyond the boundaries of the BDCP Plan Area.

### *Role of Alternatives*

- Under NEPA, alternatives are generally analyzed at a similar level of detail. The alternatives analysis should present the environmental impacts of the proposed action and the alternatives in comparative form.

## California Environmental Quality Act

### *Purpose of the Effects Analysis*

- The purpose of the effects analysis is to determine and evaluate the “significant environmental effects” of the proposed project.

### *Description of Baseline Conditions*

- CEQA requires a description of the existing “environmental setting,” which is generally defined as the existing physical conditions in the project vicinity as they exist at the time the NOP is published and functions as the baseline by which lead agencies determine whether project impacts are significant.
- Unlike NEPA, the CEQA baseline may not take into account the anticipated impacts of future actions or conditions expected to occur after project approval, though the baseline may reflect the impacts of past or present projects to the extent they are reflected in existing conditions.

### *Standards and Criteria by which Effects are Measured*

- CEQA requires that an EIR reach a conclusion as to the significance of each impact of the proposed project. A “significant effect” is defined as a substantial or potentially substantial adverse change in the environment. In general, lead



agencies have considerable discretion as how to apply this general definition to particular categories of environmental impacts.

- In some instances, however, CEQA defines what constitutes a significant effect. For example, with respect to biological resources, the CEQA Guidelines (regulations) require “mandatory findings of significance” if the analysis concludes that: (1) The project has the potential to: ... substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species ...

#### *Scope of the Analysis*

- Under CEQA, the project or plan area does not constitute the “impact area.” Rather, the effects analysis must cover areas where physical conditions will be affected, directly or indirectly, by the proposed project. Thus, the analysis may extend to areas outside of the project or plan area boundaries. Indirect effects must be “reasonably foreseeable” in order to require analysis under CEQA.

#### *Role of Alternatives*

- An EIR must include “a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project[.]” The analysis of alternatives must include sufficient information to allow a “meaningful” evaluation and comparison with the proposed project. Unlike NEPA, the potential impacts associated with an alternative need not be discussed at a similar level of detail as the proposed action.

### The Delta Reform Act

#### *General Policies Set Forth in Delta Legislation*

- A basic goal of the State for the Delta is to “[a]chieve the two coequal goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem.”
- The coequal goals shall be achieved in a manner that “[p]rotect[s] and enhance[s] the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place.”
- “The policy of the State of California is to reduce reliance on the Delta in meeting California’s *future* water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. Each region

that depends on water from the Delta watershed shall improve its *regional self-reliance* for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts.”

- The State Water Resources Control Board was required to develop Delta flow criteria (volume, quality, and timing) sufficient to protect public trust resources, to be used “[f]or the purpose of *informing* planning decisions for the Delta Plan and the Bay Delta Conservation Plan.”

#### *Relevance to the Effects Analysis*

- Under the Delta Reform Act, the BDCP may not be eligible for inclusion in the Delta Plan, and the public benefits associated with the BDCP shall not be eligible for state funding, unless the BDCP complies with the NCCPA and with CEQA. The purpose of the Effects Analysis with respect to the Delta Reform Act should, therefore, be the same as with respect to the NCCPA and CEQA, as understood in light of the policy objectives set forth above.
- Furthermore, if the BDCP “has been approved as a habitat conservation plan” and the Department of Fish and Game (DFG) (i) approves the BDCP as an NCCP and (ii) determines that the BDCP meets the general requirements of CEQA and the specified EIR contents set forth in Water Code section 85320, then the Delta Stewardship Council (DSC) *shall* incorporate the BDCP in the Delta Plan (though DFG’s determinations can be appealed to the DSC).
- In addition to general compliance with the NCCPA and CEQA, the Delta Reform Act specifically requires that the BDCP comply with CEQA by, among other things, including a “comprehensive review and analysis” of the following:
  - “The potential effects of climate change, possible sea level rise up to 55 inches, and possible changes in total precipitation and runoff patterns on the conveyance alternatives and habitat restoration activities considered in the environmental impact report.”
  - “The potential effects on migratory fish and aquatic resources.”
  - “The potential effects on Sacramento River and San Joaquin River flood management.”
  - “The resilience and recovery of Delta conveyance alternatives in the event of catastrophic loss caused by earthquake or flood or other natural disaster.”
  - “The potential effects of each Delta conveyance alternative on Delta water quality.”

### *Description of Baseline Conditions*

- The Delta Reform Act is silent as to baseline conditions. Because compliance with the NCCPA and CEQA is required for the BDCP to be eligible for inclusion in the Delta Plan and for state funding, the baseline conditions should be the same as under CEQA and the NCCPA.

### *Standards and Criteria by which Effects are Measured*

- The Delta Reform Act does not specifically prescribe any standards or criteria by which effects are measured. Because compliance with the NCCPA and CEQA is required for the BDCP to be eligible for inclusion in the Delta Plan and for state funding, the standards and criteria by which effects are measured should be the same as under CEQA and the NCCPA.

### *Scope of the Analysis*

- The Delta Reform Act does not specifically address the geographic scope of the analysis. Because compliance with the NCCPA and CEQA is required for the BDCP to be eligible for inclusion in the Delta Plan and for state funding, the scope of the analysis should be the same as under CEQA and the NCCPA.

### *Role of Alternatives*

- The Delta Reform Act requires that the EIR portion of the EIR/EIS for the BDCP include a “comprehensive review and analysis” of “reasonable range of flow criteria, rates of diversion, and other operational criteria required to satisfy the criteria for approval as [an NCCP] and other operational requirements and flows necessary for recovering the Delta and restoring fisheries under a reasonable range of hydrologic conditions, which will identify the remaining water available for export and other beneficial uses.”
- In addition, the Delta Reform Act requires that the BDCP EIR include a comprehensive review and analysis of a “reasonable range of Delta conveyance alternatives, including through-Delta, dual conveyance, and isolated conveyance alternatives and including further capacity and design options of a lined canal, an unlined canal, and pipelines.”
- Although the Act does not define what it means by “comprehensive review and analysis,” a conservative and logical reading of the operative language suggests that the alternatives identified for consideration cannot be “screened out” but rather must be addressed in “meaningful detail” as required under CEQA case law for alternatives carried forward for full consideration.